DETAILED ACTION

1.   This action is in response to Applicant's submission filed 5/17/2010, responding to the

3/23/2010 Office action which detailed the rejection of claims 40-54. Claims 40, 45, and 50

have been amended. Claims 40-54 remain pending in the application and have been fully

considered by the examiner.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 5/17/2010 has been entered.

Terminal Disclaimer

3.   The terminal disclaimers filed on 9/28/2010 disclaiming the terminal portion of any

patent granted on this application which would extend beyond the expiration date of U.S. Patent

Application No. 10/750,160, and U.S. Patent Nos. 7,367,025, 7,506,315, 7,743,367, and

7,707,557, have been reviewed and are accepted. The terminal disclaimers have been recorded.

EXAMINER'S AMENDMENT

4.   An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with

Spencer Hunter, clerk for Gregory Caldwell, Reg. No. 39,926, on 9/27/2010. During an

interview on 9/14/2010, the examiner proposed the following claim amendments and also

suggested filing terminal disclaimers for several associated patents and applications. Mr. Hunter

agreed to discuss the issues with Mr. Caldwell, and likewise with the applicant. On 9/27/2010,

Mr. Caldwell submitted a fax in agreement with the proposed amendments.

The application has been amended as follows:

Amendment to the Claims:

40. (Currently amended) A method for modifying an application to provide functionality for

      tracing a program flow of the application at a user-configurable level of granularity

      specified via a Graphical User Interface presented at an end-user device, the method

      comprising:

reading program code from memory and processing said program code with one or more

      processors to perform the following:

presenting to the end-user device via the Graphical User Interface, options for modifying the

      application's bytecode by injecting tracing and debugging operations into the

      application's bytecode at the user-configurable level of granularity specified via the

      Graphical User Interface, wherein the application is composed of a plurality of archive

      files associated with two or more distinct tiers in a multi-tiered architecture, the archive

      files having respective class files, and the respective class files having respective

      methods, and wherein the options for modifying the application's bytecode includes:

      modifying bytecode of only a subset of a plurality <u>of</u> methods from which the application

            is composed, the subset of the plurality of methods selected from two or more

            class files in two or more archive files composing the application's bytecode as

            specified via the Graphical User Interface presented to the end-user device,

            wherein the two or more archive files are associated with two or more distinct

            tiers of the multi-tiered architecture, and wherein the modified subset of the

            plurality of methods specified provides the user-configurable level of granularity

by providing the functionality for tracing the program flow of the application

through only the subset of the plurality of methods specified via the tracing and

debugging operations injected into the subset of the plurality of methods

specified;

executing the application in an object oriented runtime frame work, wherein executing the

application includes processing a portion of the application's bytecode that was modified

in accordance with the user-configurable level of granularity specified via the Graphical

User Interface; and

presenting output generated from execution of the portion of the application's bytecode that was

modified to the end-user device via the Graphical User Interface[[,]];

wherein the portion of the application's bytecode that was modified includes a method entry or

method exit;

wherein said dispatch unit is invoked by the modified bytecode and recognizes the invoking

method associated with the modified bytecode by way of receiving the invoking method's

class identifier, the invoking method's identifier, and the invoking method's parameters;

wherein the dispatch unit redirects program flow to one or more plug-in modules comprising

plug-in handlers; and

wherein said output is provided by said plug-in handlers.

Claims 42-43 (Canceled).

44. (Currently Amended) In line 1, replace "43" with "40".

45. (Currently amended) A machine readable storage medium containing program code that

      when processed by one or more processors of a computer causes a method to be

      performed:

presenting to an end-user device via a Graphical User Interface, options for modifying the

      application's bytecode by injecting tracing and debugging operations into the

      application's bytecode at a user-configurable level of granularity specified via the

      Graphical User Interface, wherein the application is composed of a plurality of archive

      files associated with two or more distinct tiers in a multi-tiered architecture, the archive

      files having respective ~~having respective~~ methods therein, and wherein the options for

      modifying the application's bytecode includes:

      modifying bytecode of only a subset of a plurality <u>of</u> methods from which the application

            is composed, the subset of the plurality of methods selected from two or more

            archive files composing the application's bytecode as specified via the Graphical

            User Interface presented to the end-user device, wherein the two or more archive

            files are associated with two or more distinct tiers of the multi-tiered architecture,

            and wherein the modified subset of the plurality of methods specified provides the

            user-configurable level of granularity by providing the functionality for tracing

            the program flow of the application through only the subset of the plurality of

            methods;

executing the application in an object oriented runtime frame work; and

presenting output generated from execution of the portion of the application's bytecode that was

    modified to the end-user device via the Graphical User Interface[[,]];

wherein the portion of the application's bytecode that was modified includes a method entry or

    method exit;

wherein said dispatch unit is invoked by the modified bytecode and recognizes the invoking

    method associated with the modified bytecode by way of receiving the invoking method's

    class identifier, the invoking method's identifier, and the invoking method's parameters;

wherein the dispatch unit redirects program flow to one or more plug-in modules comprising

    plug-in handlers; and

wherein said output is provided by said plug-in handlers.

Claims 47-48 (Canceled).

49. (Currently Amended) In line 1, replace "48" with "45".

50. (Currently amended) A computer comprising:

a Graphical User Interface to present options for modifying an application's bytecode by

    injecting tracing and debugging operations into the application's bytecode at a user-

    configurable level of granularity specified via the Graphical User Interface, wherein the

    application is composed of a plurality of archive files associated with two or more

    distinct tiers in a multi-tiered architecture, the archive files having respective methods

    therein, and wherein the options for modifying the application's bytecode includes:

            modifying bytecode of only a subset of a plurality <u>of</u> methods from which the application

is composed, the subset of the plurality of methods from which the application is

composed, the subset of methods selected from two or more class files in two or

more archive files composing the application's bytecode as specified via the

Graphical User Interface, wherein the two or more archive files are associated

with two or more distinct tiers of the multi-tiered architecture, and wherein the

modified subset of the plurality of methods specified provides the user-

configurable level of granularity by providing the functionality for tracing the

program flow of the application through only the subset of the plurality of

methods specified; and

the Graphical User Interface to further present output generated from execution of the portion of

the application's bytecode that was modified[[,]]<u>;</u>

<u>wherein the portion of the application's bytecode that was modified includes a method entry or</u>

<u>method exit;</u>

<u>wherein said dispatch unit is invoked by the modified bytecode and recognizes the invoking</u>

<u>method associated with the modified bytecode by way of receiving the invoking method's</u>

<u>class identifier, the invoking method's identifier, and the invoking method's parameters;</u>

<u>wherein the dispatch unit redirects program flow to one or more plug-in modules comprising</u>

<u>plug-in handlers; and</u>

<u>wherein said output is provided by said plug-in handlers.</u>

Claims 52-53 (Canceled).

54. (Currently Amended) In line 1, replace "53" with "50".

Allowable Subject Matter

5.   Claims 40-41, 44-46, 49-51, and 54 are allowed.

6.   The following is an examiner's statement of reasons for allowance:

The examiner indicated that this application would be in condition for allowance if the

independent claims 40, 45, and 50 are amended to include the features as provided in the above

amendments. The cited prior art taken alone or in combination fail to teach, in combination with

the other claimed limitations, the above referenced features. The applicant agreed to amend the

independent claims 40, 45, and 50 as indicated by the examiner. The distinctions provided by

the independent claims apply equally to all dependent claims. Thus, all pending claims 40-41,

44-46, 49-51, and 54 are allowed.

         Any comments considered necessary by applicant must be submitted no later than the

payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

Allowance."

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James D. Rutten whose telephone number is (571)272-3703. The

examiner can normally be reached on M-F 10:00-6:30.

         If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tuan Q. Dam can be reached on (571)272-3695. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James D. Rutten/
Primary Examiner, Art Unit 2192